

December 18, 2012

Mr. Robert Gray Associate Director UCLA Real Estate 10920 Wilshire Boulevard, Suite 810 Los Angeles, CA 90024

Re: University of California Seismic Rating for 510-516 Landfair Avenue

#### Dear Robert:

Nabih Youssef & Associates (NYA) have performed an Independent Review of the 36-unit apartment building located at 510-516 Landfair Avenue in Los Angeles. The review was performed in accordance with University of California Seismic Safety Policy requirement. The expected seismic performance was determined by a review of the structural and architectural drawings.

### Description:

The building is currently under construction and is scheduled to be completed in March of 2013. The building consists of an irregular-shaped 4-story wood frame apartment building constructed on a 2-level below-grade concrete parking structure. The building is designed to the 2008 edition of the City of Los Angeles Building Code (LABC).

The roof and floors of the apartment building are typically constructed of 5/8" plywood sheathing nailed to 2x wood joists spaced at 12" or 16" on center. The joists span to wood beams and bearing wood frame walls. The walls are typically continuous to the first floor where they are supported by a 12" thick two-way reinforced concrete slab. The P-1 level of the parking structure also consists of a 12" thick two-way reinforced concrete slab. The concrete slabs span to reinforced concrete columns and perimeter concrete walls. The columns are square and rectangular-shaped and are continuous to the foundation. The foundation system consists of concrete spread footings supporting the interior columns, continuous concrete footings under the perimeter concrete walls and interior CMU walls. A 5" thick reinforced concrete slab-on-grade forms the P-2 parking level

Above grade, the lateral system consists of plywood sheathed shear walls and two single-bay steel moment frames. Hold-down anchors are typically provided at the ends of the plywood shear walls. The steel moment frames use reduced beam section connections. The plywood shear walls and steel moment frames are supported by the 1<sup>st</sup> floor concrete slab. Below grade, seismic forces are resisted by the perimeter concrete shear walls and interior reinforced CMU walls that are continuous to the foundation.

## Evaluation:

Based on a review of the structural drawings, the building is irregular in-plan with many re-entrant corners and large openings in the diaphragm. However, the layout of the plywood shear walls and steel moment frames mitigates the adverse effects of the plan irregularities. The seismic system is redundant and continuous to the first floor, where the 12" concrete slab appears to have adequate strength to transfer the seismic forces to the concrete and CMU walls below. The building appears to comply with the design and detailing requirements of the 2008 LABC.

# Conclusion:

Based on our review of the structural drawings, the expected earthquake performance of the building corresponds to the University of California seismic rating of "III" ("Good").



### References:

Set of structural drawings for the 36 Unit Apartment Building, as prepared by Naim & Associates, dated August 2011.

Set of architectural drawings for the 510-516 Landfair Avenue Apartment Building, as prepared by Arch 10, Inc., dated October 5, 2009.

Seismic Hazard Zone Report for the Beverly Hills 7.5-Minute Quadrangle, Los Angeles County, CA, prepared by State of California, Department of Conservation Division of Mines and Geology, Report No. 023, 1998. State of California Seismic Hazard Zone, Beverly Hills Quadrangle, March 25, 1999.

University of California Seismic Safety Policy, August 25, 2011.

Sincerely,

NABIH YOUSSEF & ASSOCIATES

Nabih Youssef, S.E.

Principal

Enclosure

cc: N. Youssef; O. Hata; File 12471.00